Figure 1

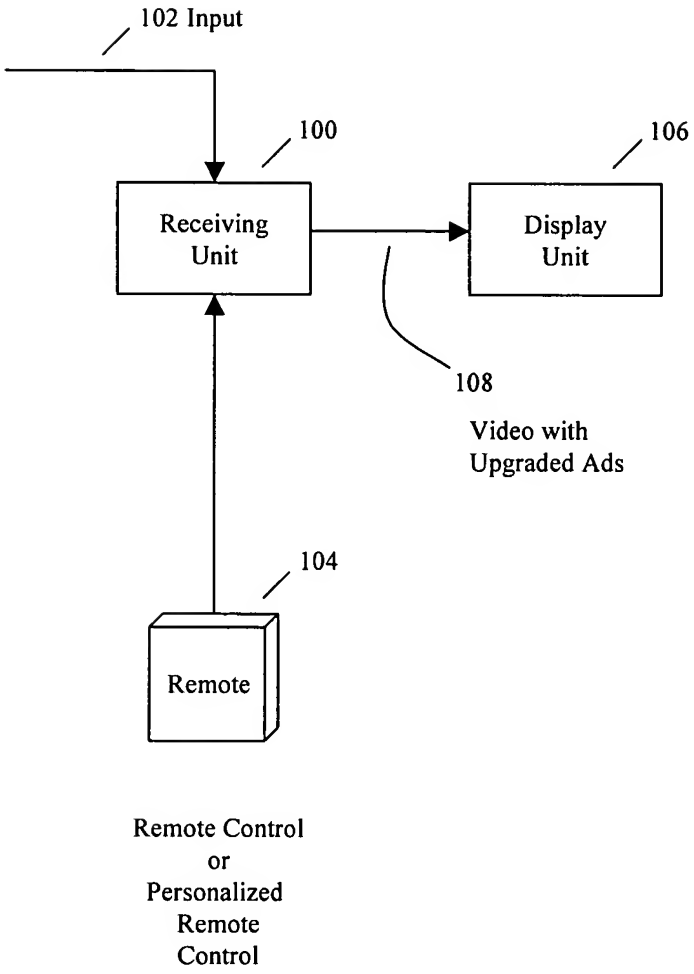

102 Input
100
106
Receiving Unit
Display Unit
108
Video with Upgraded Ads
104
Remote
Remote Control or Personalized Remote Control

Figure 2

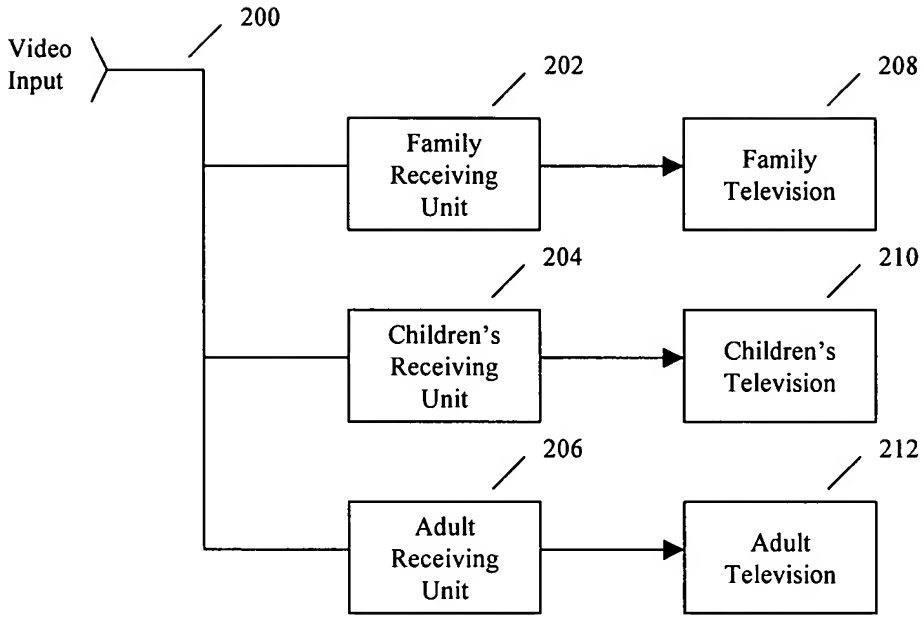

Video Input
200
202
Family Receiving Unit
208
Family Television
204
Children's Receiving Unit
210
Children's Television
206
Adult Receiving Unit
212
Adult Television

Figure 3

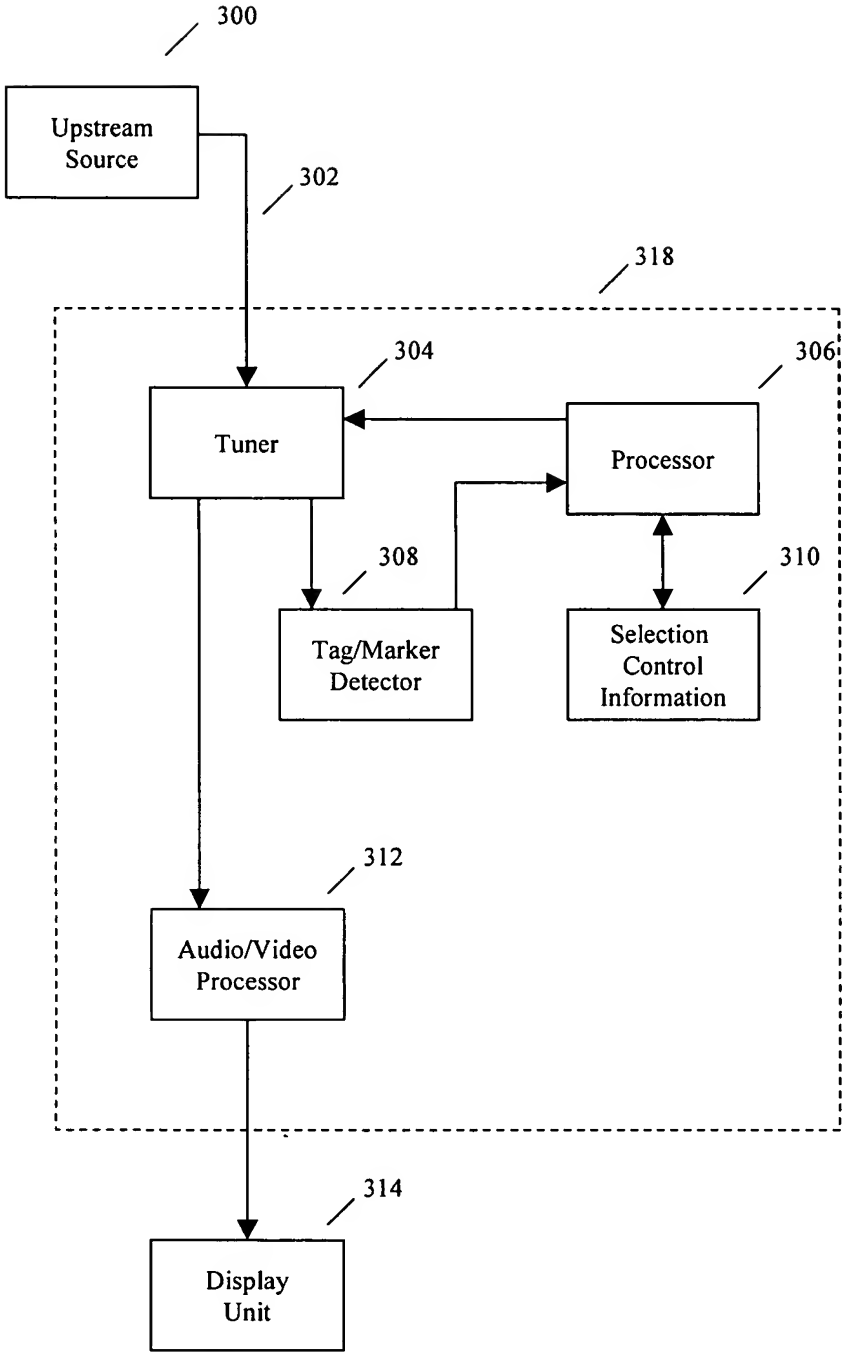

300
Upstream Source
302
318
304
306
Tuner
Processor
308
310
Tag/Marker Detector
Selection Control Information
312
Audio/Video Processor
314
Display Unit

Figure 4

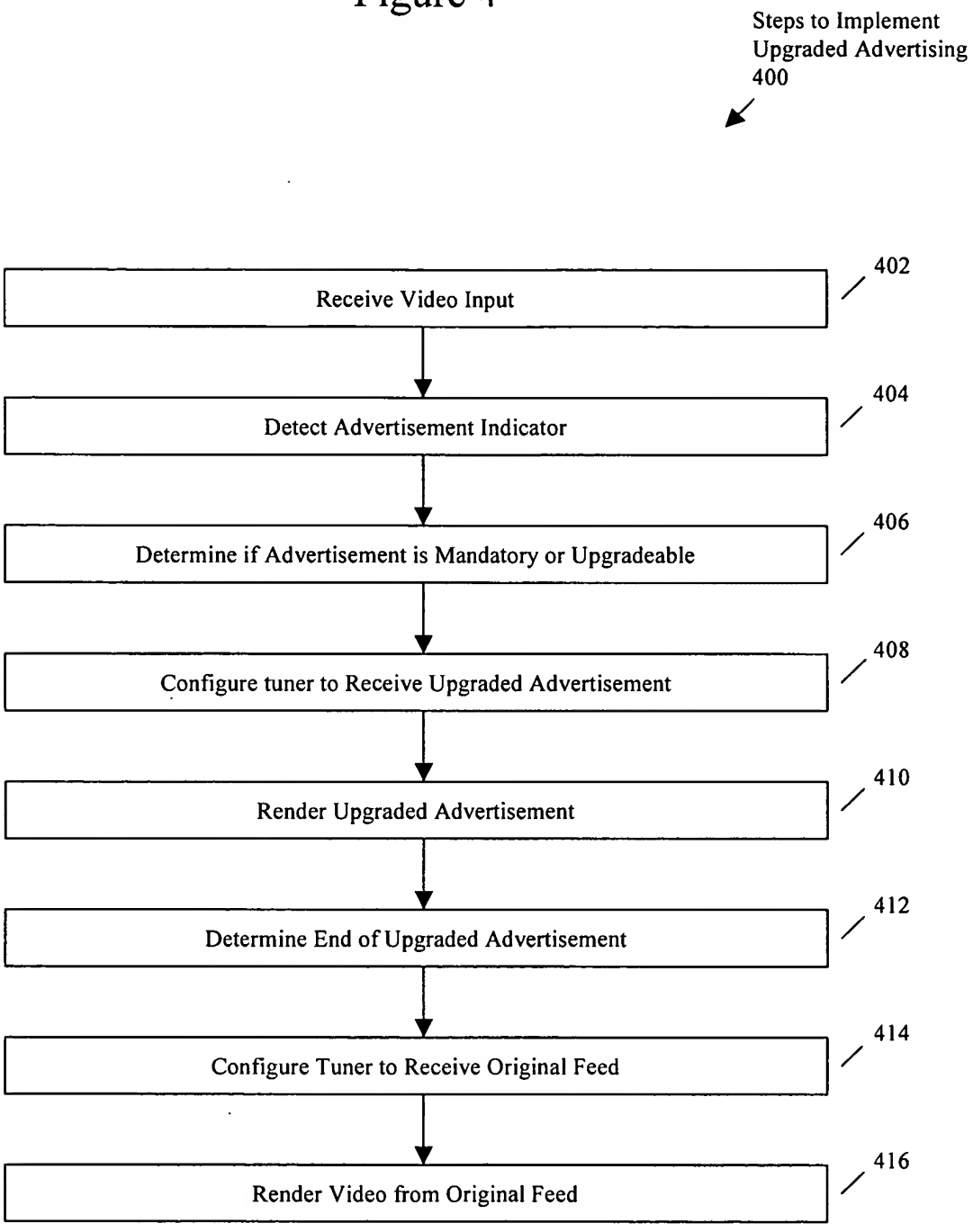

Steps to Implement Upgraded Advertising 400
Receive Video Input
402
Detect Advertisement Indicator
404
Determine if Advertisement is Mandatory or Upgradeable
406
Configure tuner to Receive Upgraded Advertisement
408
Render Upgraded Advertisement
410
Determine End of Upgraded Advertisement
412
Configure Tuner to Receive Original Feed
414
Render Video from Original Feed
416

Figure 5

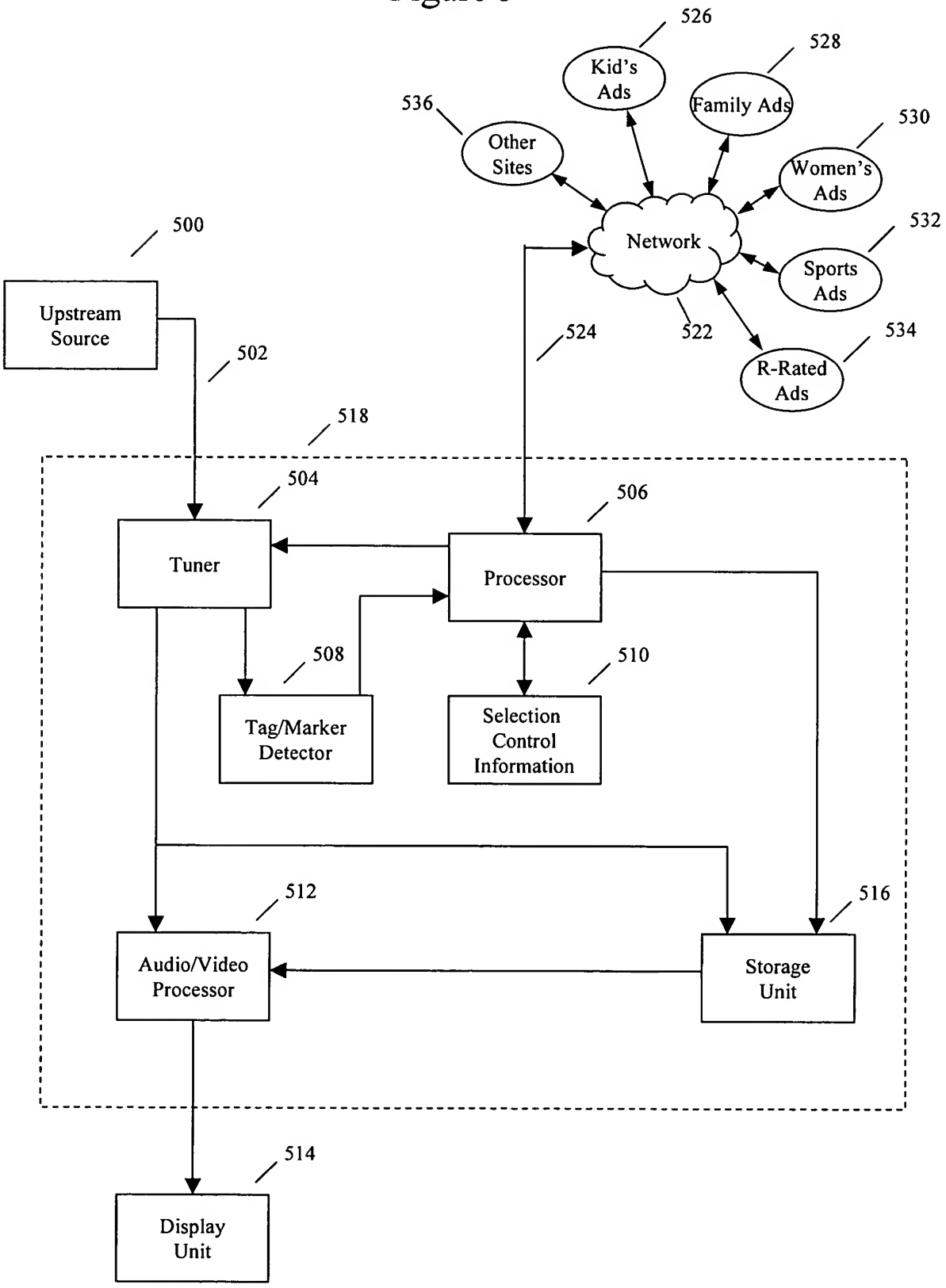

526
Kid's Ads
528
Family Ads
536
Other Sites
530
Women's Ads
500
Network
532
Sports Ads
Upstream Source
524
522
534
R-Rated Ads
502
518
504
506
Tuner
Processor
508
510
Tag/Marker Detector
Selection Control Information
512
516
Audio/Video Processor
Storage Unit
514
Display Unit

Figure 6

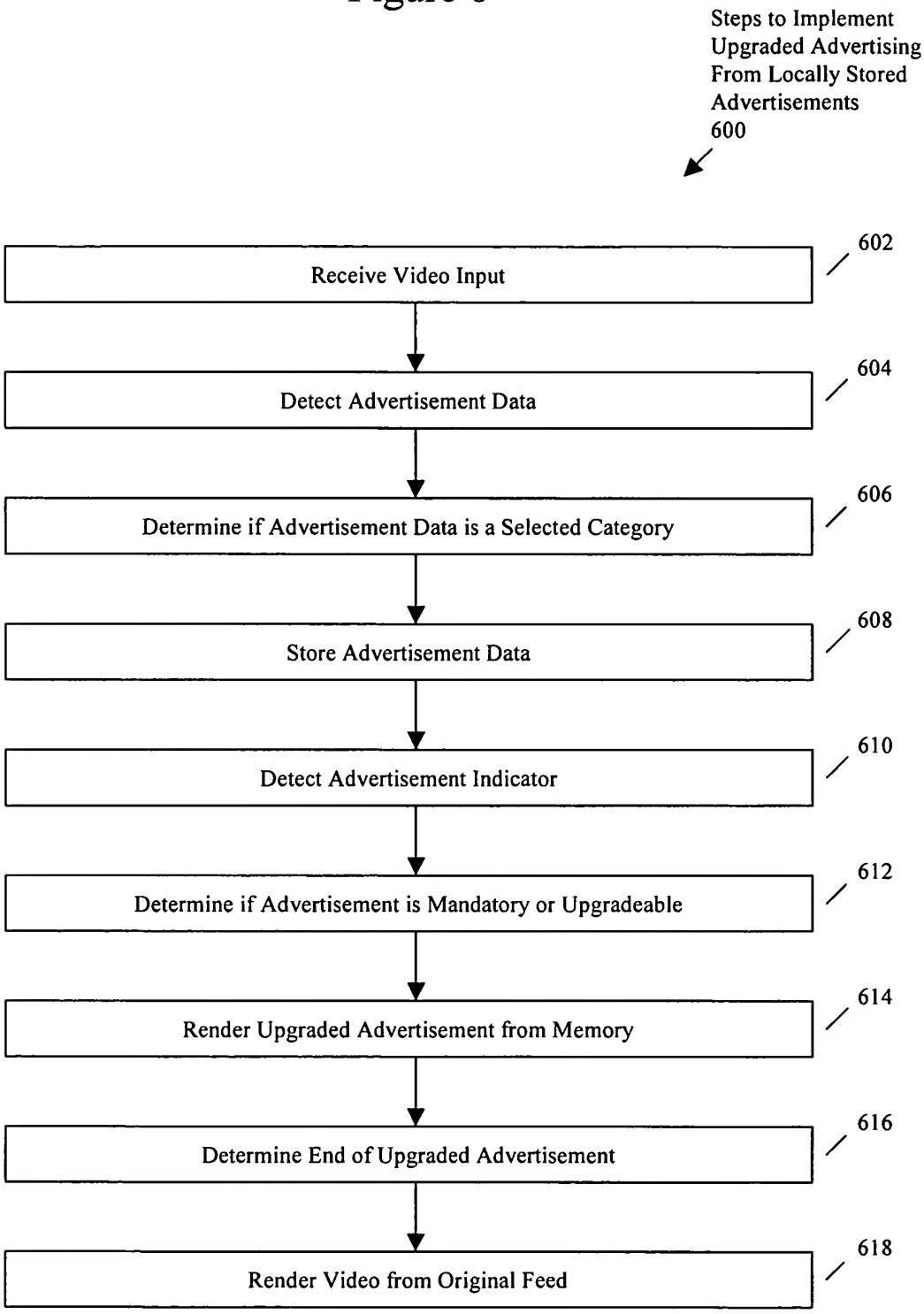

Steps to Implement Upgraded Advertising From Locally Stored Advertisements 600
Receive Video Input
602
Detect Advertisement Data
604
Determine if Advertisement Data is a Selected Category
606
Store Advertisement Data
608
Detect Advertisement Indicator
610
Determine if Advertisement is Mandatory or Upgradeable
612
Render Upgraded Advertisement from Memory
614
Determine End of Upgraded Advertisement
616
Render Video from Original Feed
618

Figure 7

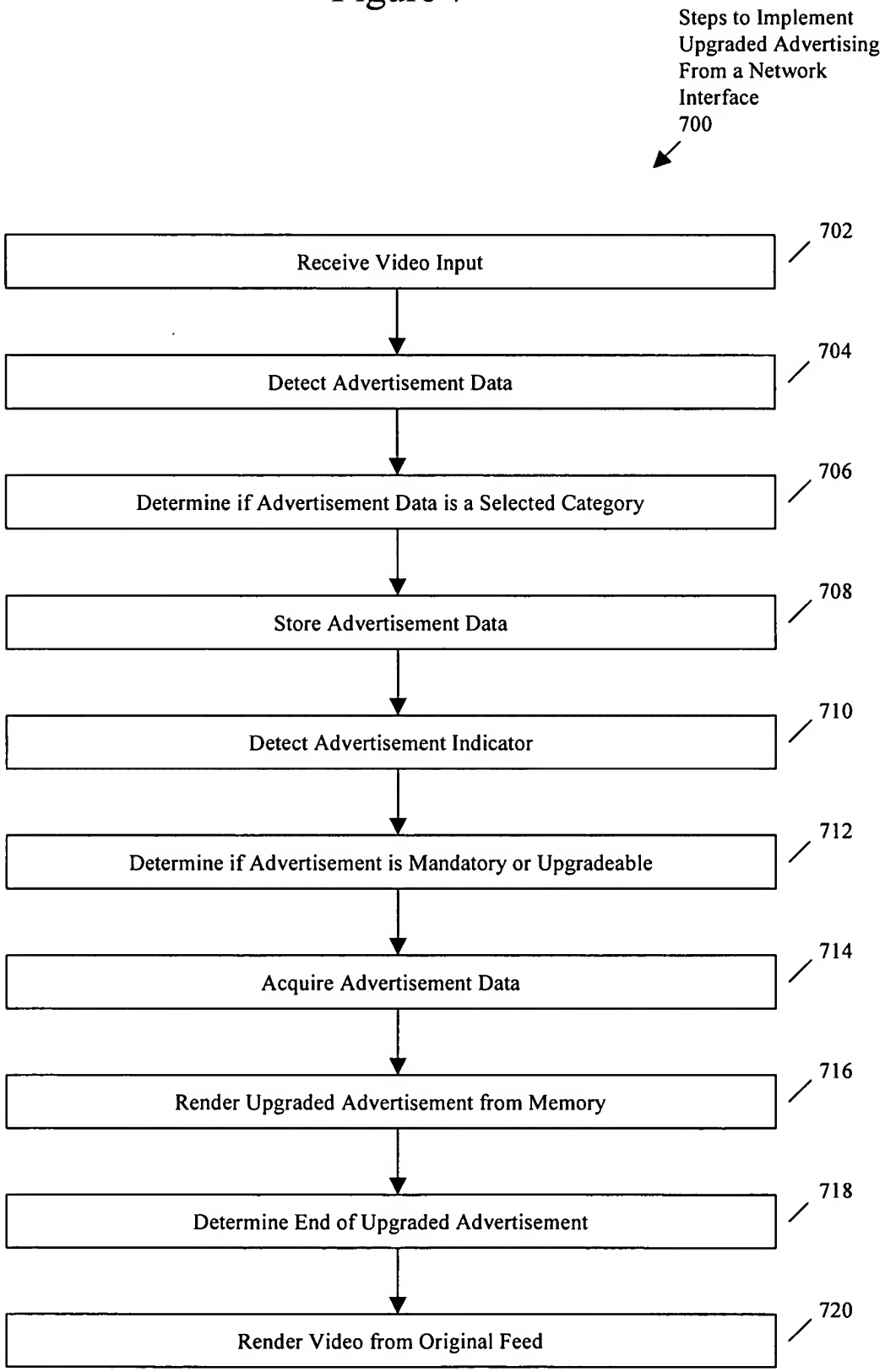

Steps to Implement Upgraded Advertising From a Network Interface
700
Receive Video Input
702
Detect Advertisement Data
704
Determine if Advertisement Data is a Selected Category
706
Store Advertisement Data
708
Detect Advertisement Indicator
710
Determine if Advertisement is Mandatory or Upgradeable
712
Acquire Advertisement Data
714
Render Upgraded Advertisement from Memory
716
Determine End of Upgraded Advertisement
718
Render Video from Original Feed
720

Figure 8

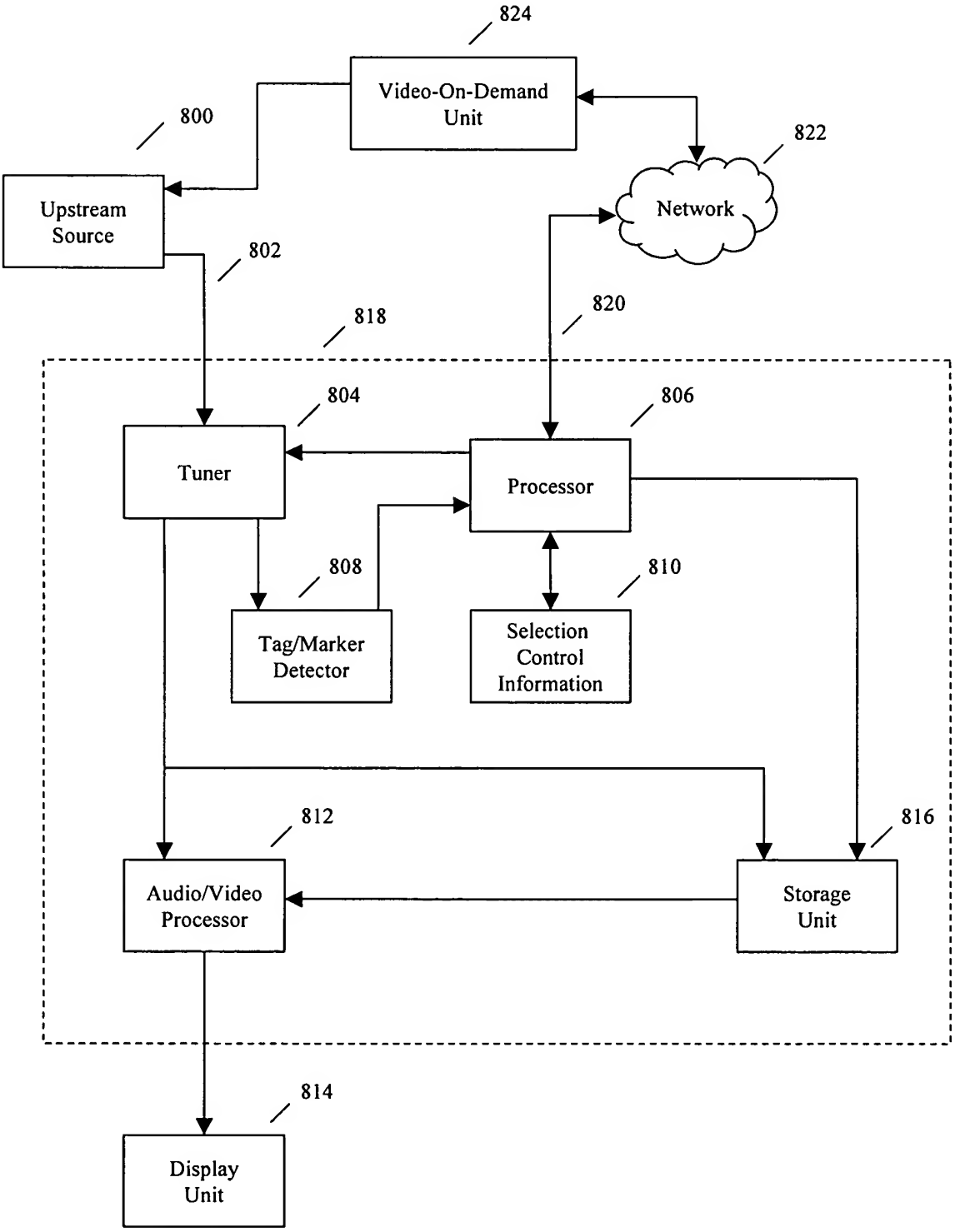

824
Video-On-Demand Unit
800
822
Upstream Source
Network
802
818
820
804
806
Tuner
Processor
808
810
Tag/Marker Detector
Selection Control Information
812
816
Audio/Video Processor
Storage Unit
814
Display Unit

Figure 9

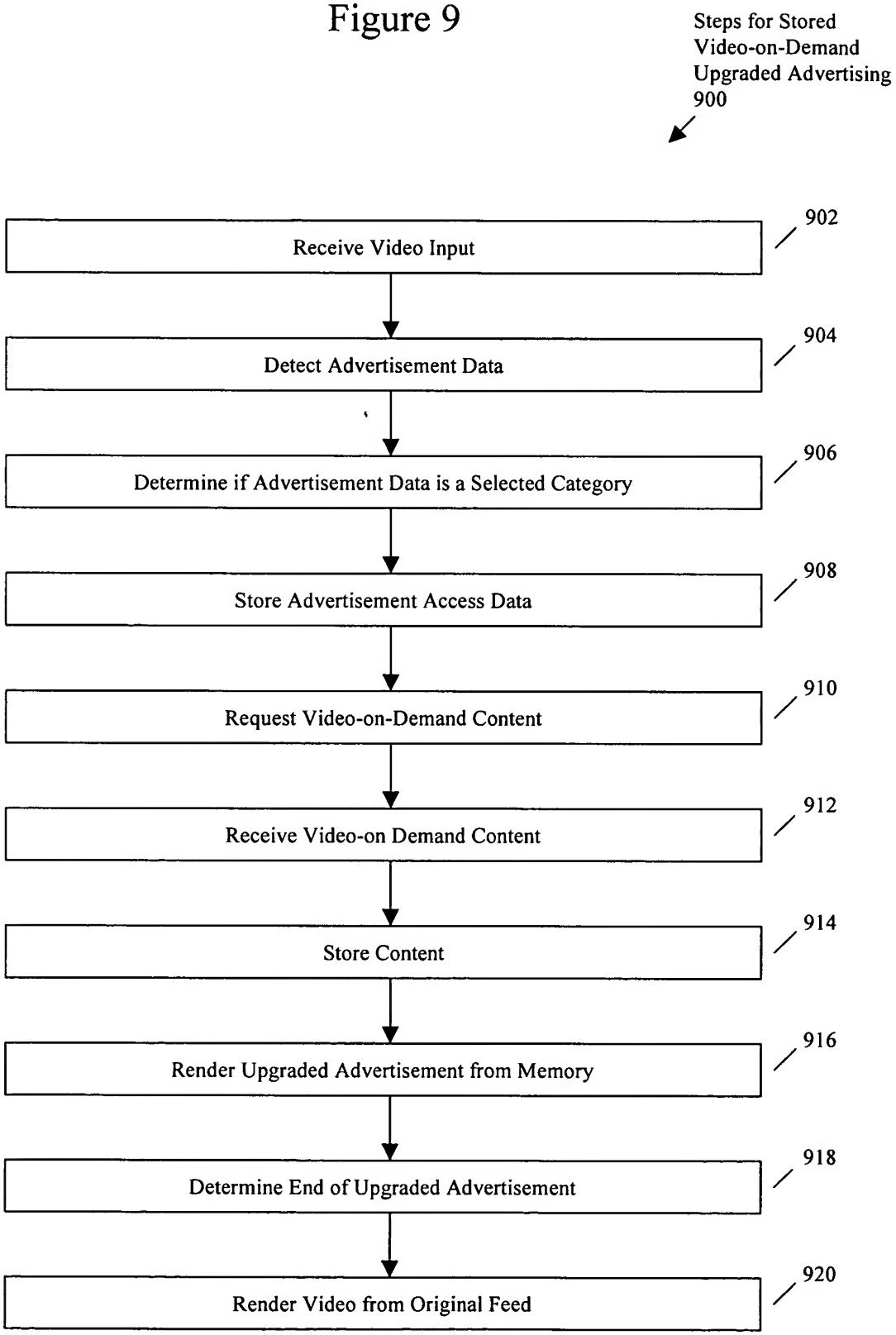

Steps for Stored Video-on-Demand Upgraded Advertising 900
Receive Video Input
902
Detect Advertisement Data
904
Determine if Advertisement Data is a Selected Category
906
Store Advertisement Access Data
908
Request Video-on-Demand Content
910
Receive Video-on Demand Content
912
Store Content
914
Render Upgraded Advertisement from Memory
916
Determine End of Upgraded Advertisement
918
Render Video from Original Feed
920

Figure 10

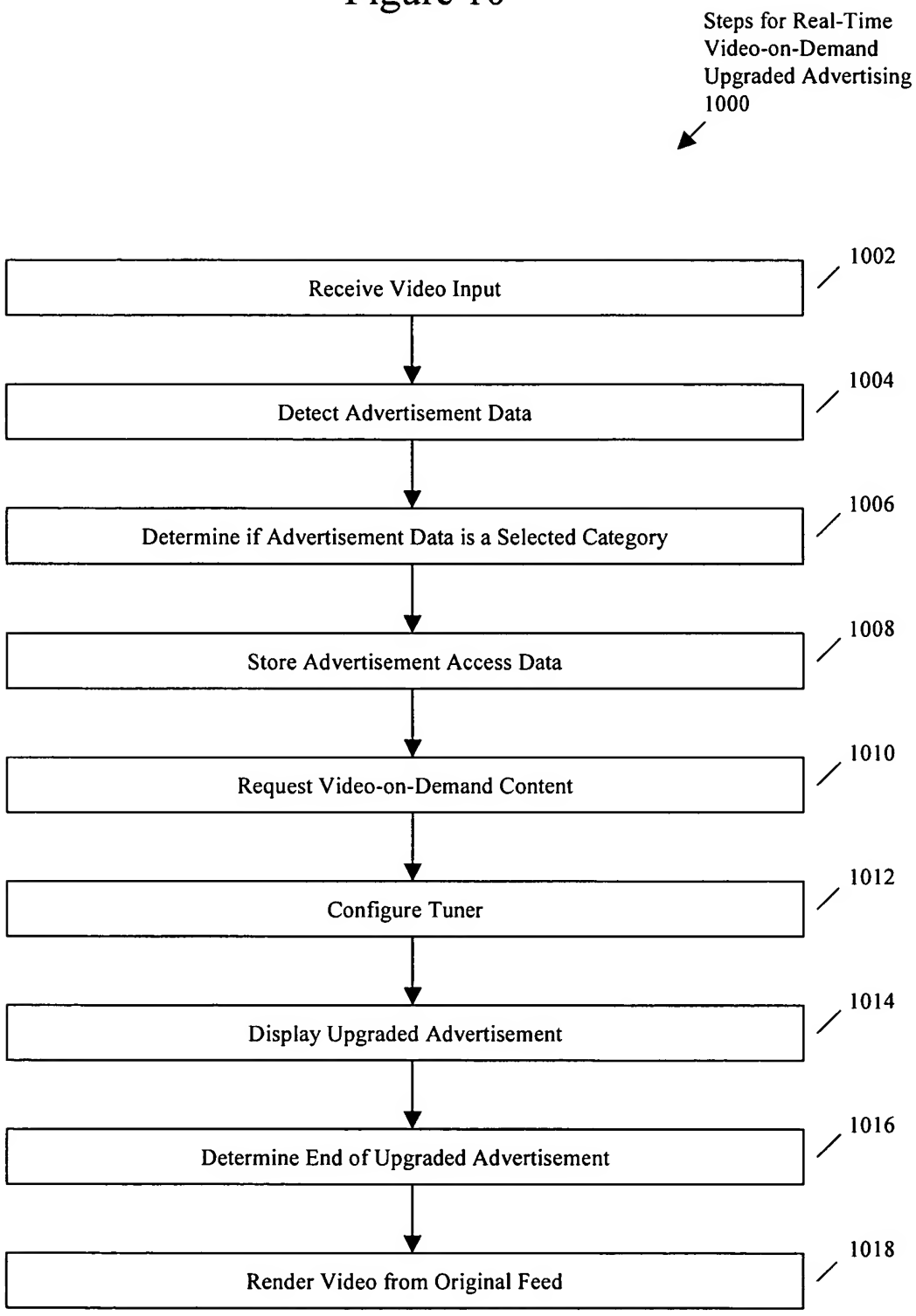

Steps for Real-Time Video-on-Demand Upgraded Advertising 1000
Receive Video Input
1002
Detect Advertisement Data
1004
Determine if Advertisement Data is a Selected Category
1006
Store Advertisement Access Data
1008
Request Video-on-Demand Content
1010
Configure Tuner
1012
Display Upgraded Advertisement
1014
Determine End of Upgraded Advertisement
1016
Render Video from Original Feed
1018

Figure 11

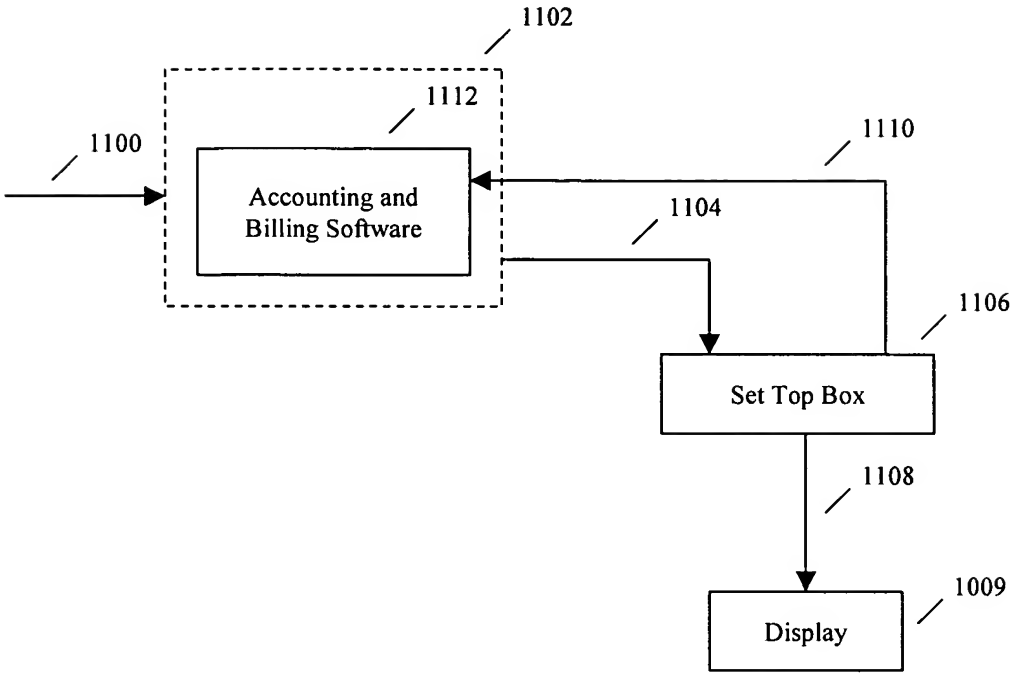

1102
1112
1100
1110
Accounting and Billing Software
1104
1106
Set Top Box
1108
1009
Display

Figure 12

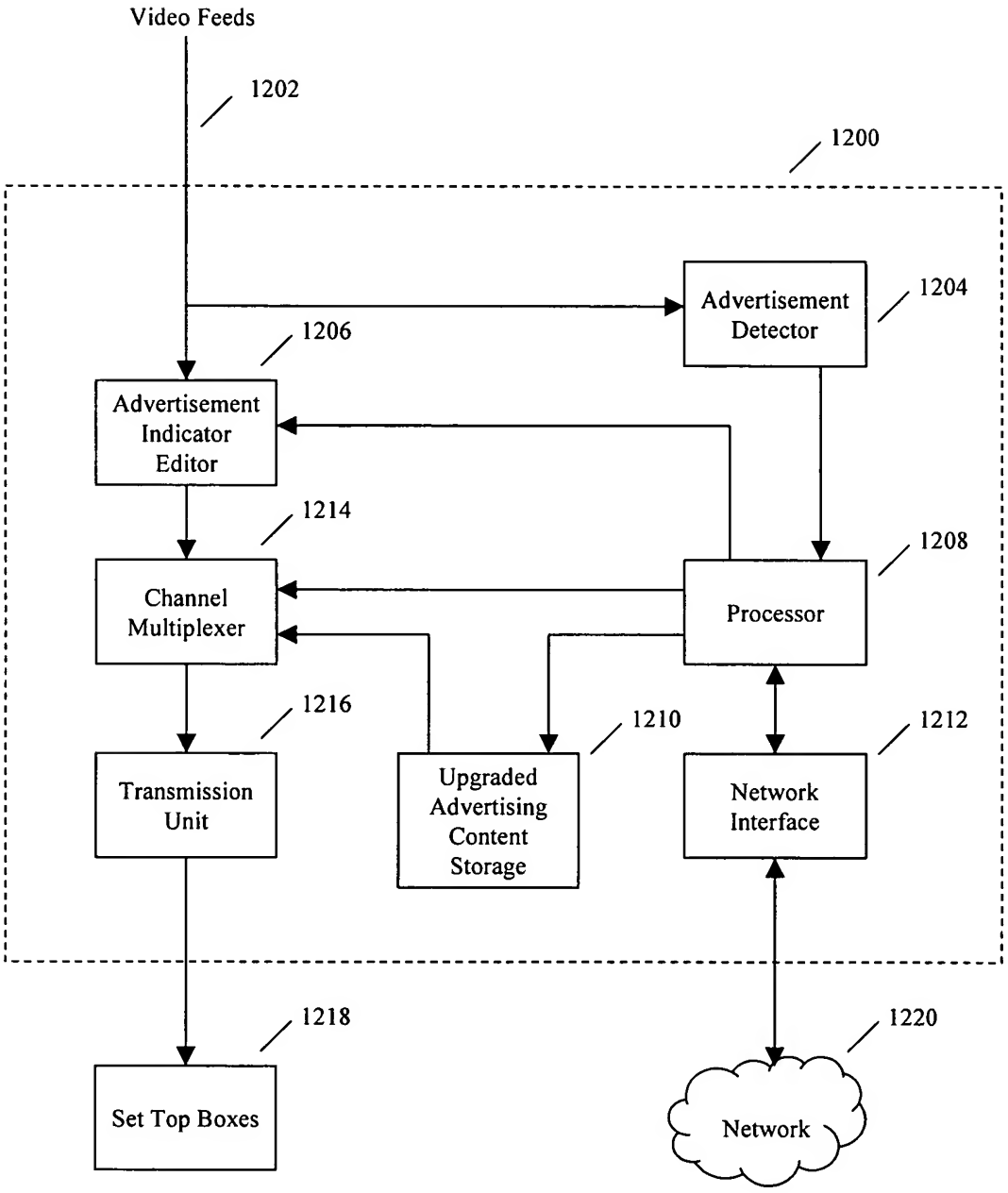

Video Feeds
1202
1200
Advertisement Detector
1204
1206
Advertisement Indicator Editor
1214
Channel Multiplexer
1208
Processor
1216
1210
1212
Transmission Unit
Upgraded Advertising Content Storage
Network Interface
1218
1220
Set Top Boxes
Network

Figure 13

Steps for Creating a Video Signal for Upgraded Advertising 1300

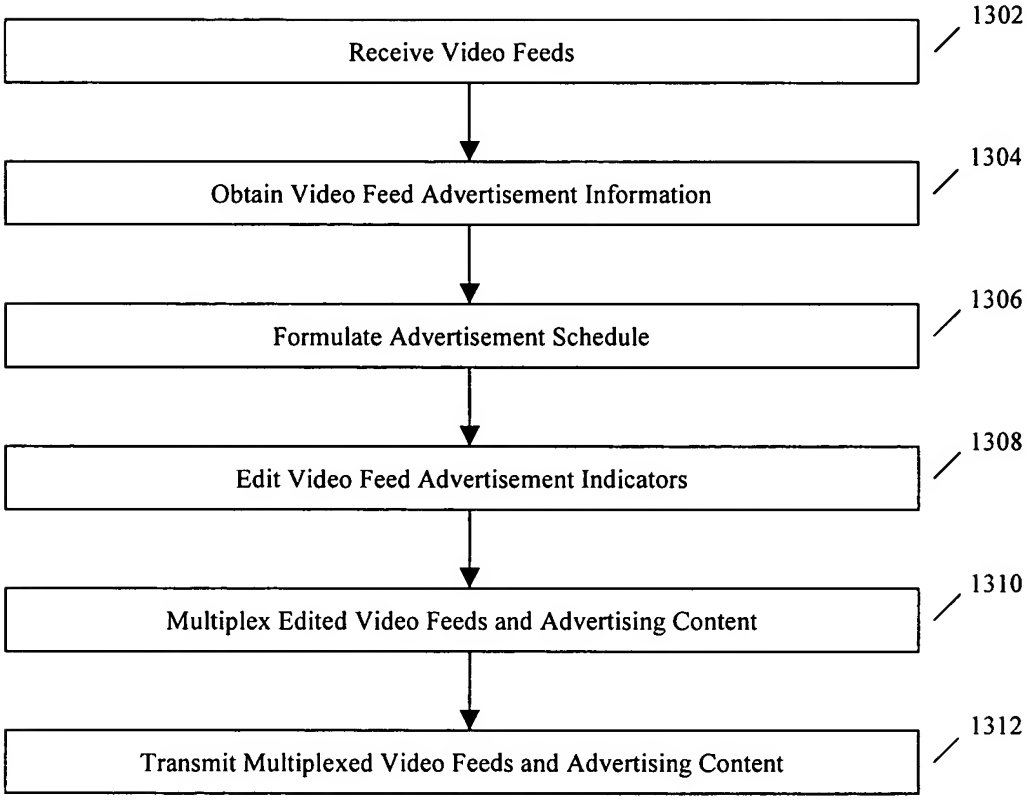
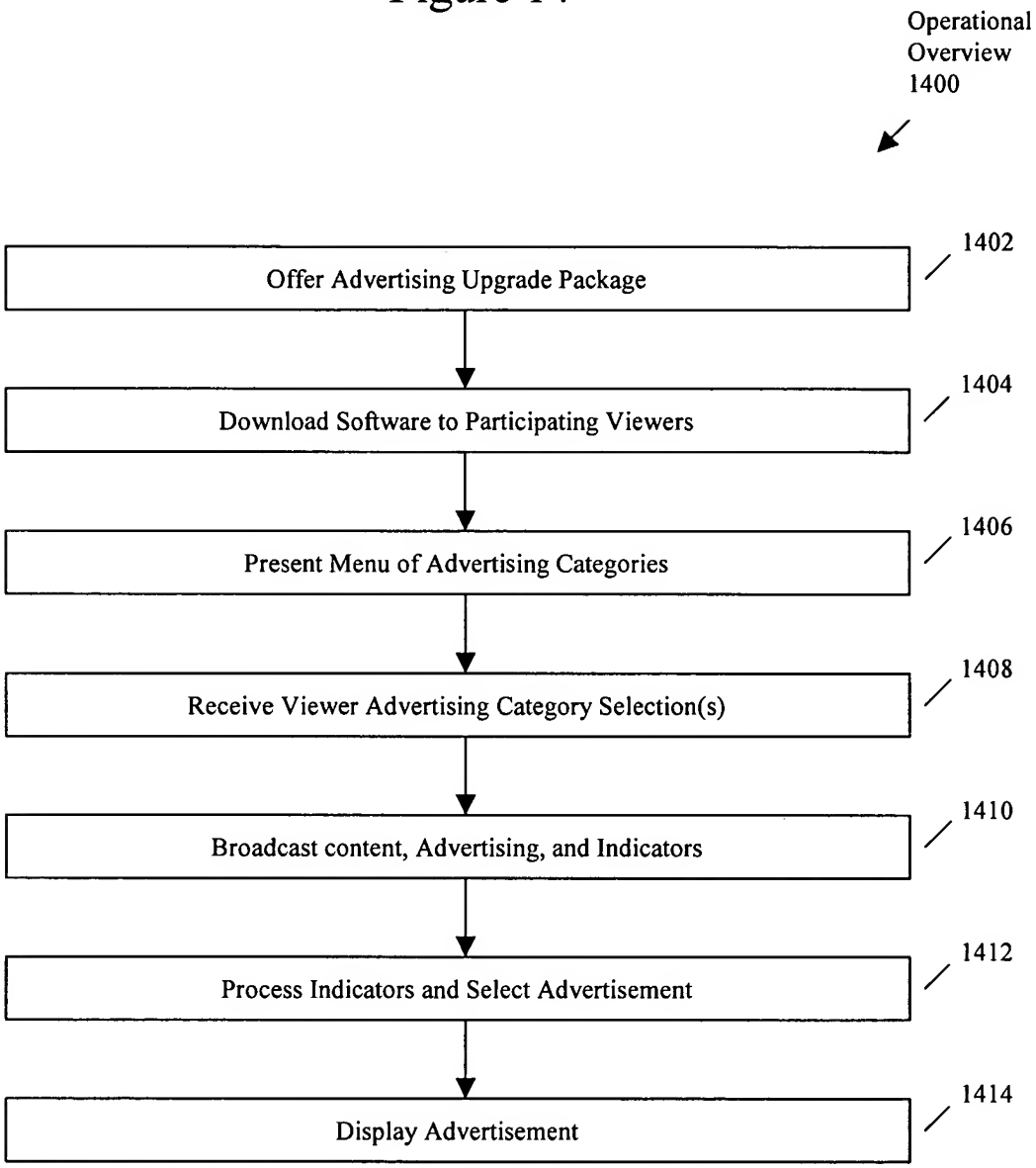


Figure 14


Operational Overview 1400
Offer Advertising Upgrade Package
1402
Download Software to Participating Viewers
1404
Present Menu of Advertising Categories
1406
Receive Viewer Advertising Category Selection(s)
1408
Broadcast content, Advertising, and Indicators
1410
Process Indicators and Select Advertisement
1412
Display Advertisement
1414